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# XLV. Notice of a colourless atmospheric arch seen in the interior of Brazil

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XLV. *Notice of a colourless Atmospheric Arch seen in the interior of Brazil.* By WILLIAM JORY HENWOOD, Esq., F.R.S., F.G.S., Chief Commissioner of the Gongo Soco and Bananal Gold Mines, &c. &c.

To Sir David Brewster, K.H., LL.D., F.R.S.L. & E., &c.

MY DEAR SIR DAVID,

THE village of Cattas Altas is situated in long.  $43^{\circ} 15'$  west, and lat.  $19^{\circ} 58' 30''$  south, on an open undulating expanse of pasture land, about 3500 feet above the sea, bounded on the south-west by the mountain-chain of the Caraças, which rises from 4000 to 5000 feet above it, a deep narrow glen intervening between them.

At about seven o'clock in the morning of the 12th of May last\*, I had occasion to cross this open country towards the north-west, almost on the edge of the ravine. A dense mist covered all the lower grounds, whilst the little hills shone in unclouded sun-light; in the fog a light air from the westward was perceptible, but a gentle breeze in an opposite direction prevailed on the hills.

During my journey I passed several times from sunshine into mist, and *vice versâ*.

Whilst immersed in fog on the verge of the vale, and some 400 feet above its bottom, an arch of about forty-five degrees in altitude became visible. In width, and indeed in every other respect, it exactly resembled a rainbow, except that the whole of its upper part was entirely colourless, being, as it were, a bow of denser mist surrounded by the ordinary fog. For an altitude of about ten degrees, however, of the lower portion, which was beneath the horizon of my station, it had the faintest possible tint of violet colour, which was rather more perceptible in the south-eastern extremity than in the other.

On entering the mist a second time, a few minutes later, I observed a similar, but fainter and less perfect arch.

My isolated situation affords me access to but few books of reference; and as but one of these mentions a colourless rainbow†, and as I have never before seen one myself, I venture to trouble you with this brief notice of a phenomenon which perhaps may not be of frequent occurrence.

I have the honour to remain,

My dear Sir David,

Your most faithful, humble Servant,

Gongo Soco Gold Mines, Brazil,

W. J. HENWOOD.

June 3, 1848.

\* At Gongo Soco, about sixteen miles off, the temperature at 6 A.M. was  $51^{\circ}$ , and at 9 A.M.  $63^{\circ}$ .

† *Encyclop. Brit.*, 6th edit. (1823), article "*rainbow*."